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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/045,654	10/26/2001	Hugh L. Brunk	P0483	1906

23735   7590   01/16/2008

DIGIMARC CORPORATION
9405 SW GEMINI DRIVE
BEAVERTON, OR 97008

EXAMINER
POWERS, WILLIAM S

ART UNIT	PAPER NUMBER
2134	

MAIL DATE	DELIVERY MODE
01/16/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

APPLICATION NO./ CONTROL NO.	FILING DATE	FIRST NAMED INVENTOR / PATENT IN REEXAMINATION	ATTORNEY DOCKET NO.
10045654	10/26/2001	BRUNK ET AL.	P0483

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William S.. Powers	

ART UNIT	PAPER
2134	20080111

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Commissioner for Patents

The following corrects the deficiencies of the Examiner's Answer for Application 10/045654. The corrections include the real party in interest, updates the status of claims and the grounds of rejection and includes the relating proceedings appendix.

KAMBIZ ZAND
SUPERVISORY PATENT EXAMINER

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Application Number: 10/045,654
Filing Date: October 26, 2001
Appellant(s): BRUNK ET AL.

Steven W. Stewart, Registration No. 45,133
<u>For Appellant</u>

EXAMINER'S ANSWER

This is in response to the appeal brief filed May 15, 2006 appealing from the Office action mailed December 12, 2005.

(1) Real Party in Interest

A statement identifying the real party in interest, Digimarc Corporation, is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is incorrect. A correct statement of the status of the claims is as follows:

Claims 1-9 and 11-14 are allowed.

Claims 10 and 24 are cancelled.

Claims 15-23 and 25-27 are on appeal.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is incorrect.

The amendment after final rejection filed on 5/15/2006 has been entered.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is substantially correct. The 35 USC 102(e) rejections of claims 1 and 4-14 in view of Bhaskaran have been withdrawn. The 35 USC 103(a) rejections of claims 2 and 3 in view of Bhaskaran and Cox have been withdrawn. Claims 10 and 24 are cancelled. Claims 15-23 and 25-27 are on appeal.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

US Patent No. 6,330,672 to Shur is the evidence relied upon by the Examiner in the rejection of the claims under appeal.

(9) Grounds of Rejection

Claims 15-19, 22, 23 and 25-27 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No. 6,330,672 to *Shur*.

As to claim 15, *Shur* teaches:

a.   Embedding a watermark into a digital data stream (column 6, lines 38-45) said watermark having the capacity to prevent the use of the digital data after a predetermined date or number of plays (column 10, lines 1-11).

b.   Rendering the watermarked digital data stream (column 6, lines 61-67).

c.   Detecting the watermark of the watermarked digital data stream (column 11, lines 12-24).

d.   Generating a metric based on the detected watermark (column 11, lines 12-24).

e.   Embedding said metric into data stream as part of the digital watermark

(column 10, lines 1-11).

As to claim 16, *Shur* teaches the broadcasting of the digital data stream (column

6, lines 61-67).

As to claim 17, *Shur* teaches the extraction of the watermark from a media signal

and adding new data to the digital watermark (column 11, lines 13-23).

As to claim 18, *Shur* teaches extracting a watermark, adding data to it and

embedding it in the media signal as a second watermark (column 11, lines 12-24).

As to claims 19 and 23, *Shur* teaches:

a.   Embedding a digital watermark in a media stream (column 6, lines 38-45).

b.   Analyzing (rendering) the embedded watermark (column 11, lines 3-24) to

determine a baseline state, such as the number of permitted plays (column 10, lines 1-

11).

c.   Embedding the number of plays allowed for the digital data in the media

stream (column 10, lines 1-11).

d.   Embedding the encoding algorithm for the digital data in the media stream

(column 10, lines 1-11).

As to claim 22, *Shur* teaches embedding encoding algorithm for the digital data in the media stream (column 10, lines 1-11) so that said data can be played at destination device (column 4, lines 35-44).

As to claim 25, *Shur* teaches:

a.   Embedding a watermark into a digital data stream (column 6, lines 38-45) said watermark having the capacity to degrade to prevent the use of the digital data after a predetermined date or number of plays (column 10, lines 1-11).

b.   Rendering the watermarked digital data stream (column 6, lines 61-67).

c.   Detecting the watermark of the watermarked digital data stream (column 11, lines 12-24).

d.   Generating a metric based on the detected watermark (column 11, lines 12-24).

e.   Embedding said metric into data stream as part of the digital watermark (column 10, lines 1-11 and column 8, line 56-column 9, line 4).

As to claim 26, *Shur* teaches encrypting the data prior to embedding (column 5, lines 22-58).

As to claim 27, *Shur* teaches a predetermined metric protocol, such as the number of plays allowed (column 10, lines 1-11).

Claims 20 and 21 rejected under 35 U.S.C. 103(a) as being unpatentable

over U.S. Patent No. 6,330,672 to Shur in view of U.S. Patent No. 6,366,685 to

Takaragi.

As to claims 20 and 21, Shur teaches embedding encoding algorithm for the

digital data in the media stream (column 10, lines 1-11) so that said data can be played

at destination device (column 4, lines 35-44), but does not expressly state that the

destination device is a printer.

Takaragi teaches the use of printer-specific and color-space data in the rendering

of watermarked data (column 2, lines 35-60 and column 4, lines 28-59) in order to

prevent the abuse of intellectual property (column 1, lines 28-31).

Therefore, it would be obvious to one of ordinary skill in the art at the time the

invention was made to modify the invention of Shur by including printer-specific and

color-space data in the rendering of watermarked data in order to prevent the abuse of

intellectual property (column 1, lines 28-31).

(10) Response to Argument

Applicant's arguments, see Appeal Brief, pages 18-23, filed 5/15/2006, with

respect to claims 1-9 and 11-14 have been fully considered and are persuasive. The 35

USC 102(e) rejections of claims 1 and 4-14 and the 35 USC 103(a) rejections of claims

2 and 3 have been withdrawn. In addition, claims 20-22 are objected to for their

dependency on a rejected base claim.

The allowable subject matter of the aforementioned claims is the extraction of the

message from the digital watermark and comparing that message to the watermark to

determine if any degradation has occurred to the watermark. The closest prior art

Bhaskaran compares the watermark to a hash of the watermarked to determine any

degradation, but, as pointed out by the Applicant, the hash of the document is not

extracted from the watermark.

In response to the Applicant's remark that the limitations of independent claim 25

are not met by the *Shur* patent as to the degradation of the digital watermark, the

Examiner respectfully disagrees.

First, Applicant contends that *Shur* does not teach a digital watermark that

"degrade[s] upon at least one form of signal processing." As detailed in the Final Action,

Shur teaches that the digital watermark has, within it, the number of permissible plays of

a media signal (e.g. song, movie, book, ...) (*Shur*, column 10, lines 1-10). Each time the

signal in question is played (processed); the permissible number of plays is

decremented. The permissible plays data is contained within the watermark, is part of

said watermark and said watermark changes (degrades) with each play. The Examiner

concedes that *Shur* does not teach "fragile" or "semi-fragile" watermarks, but points out

that neither of those terms are used in the claim language.

Second, Applicant contends that Shur does not teach "determining a metric based on an embedded digital watermark." The Examiner uses the term generating instead of determining, but it is used in the same manner. The metric, the permitted number of plays, is determined or generated from data (permitted plays) within the digital watermark. The benchmark is the number of permissible plays in this case the benchmark is the number zero. When the number of permissible claims is zero, no further playbacks are possible and the watermark is degraded.

Third, Applicant contends that the limitation, "embedding data in the media signal, the data indicating how the metric was determined", was not addressed. Embedding of the digital watermark into the media stream includes indicia of the metrics that constitute the digital watermark (Shur, column 4, lines 13-34). In this case, the indicia refer to the type of transaction that is purchased by the user, namely a lease of media stream, and the limitations of that transaction, the number of permitted plays.

For the reasons presented in the previous office actions, as well as those above, the Examiner maintains the previously presented 35 USC 102(e) rejection of independent claim 25.

In response to Applicant's remark that the limitation of claim 27 is not met by the cited art, the Examiner respectfully disagrees. Applicant is directed to column 10, lines 1- 26 of Shur that describes how the metrics are processed, grouped and incorporated into the digital watermark. As best understood from the claim language, the Examiner considers this the predetermined metric protocol. The protocol is followed for each

digital watermark so that constant data such as author and title would be located in the

area while variable data would be grouped together and be placed in an area of the

digital watermark reserved for that particular kind of data.

For the reasons presented in the previous office actions, as well as those above,

the Examiner maintains the previously presented 35 USC 102(e) rejection of dependent

claim 27.

In response to Applicant's remark that the limitations of claim 19 are not met by

the cited art, the Examiner respectfully disagrees.

First, as to Applicant's argument that "the cited encoding algorithm may relate

generally to an act of embedding, it is not understood to teach or suggest a rendering

channel, e.g., a printer, a streaming device or broadcast channel" (Appeal Brief, page

13, lines 18-20), the *Shur* patent clearly teaches a rendering channel, although it is not

referred as such in the patent. The digital watermark of Shur contains data that limits

the permissible number of plays of a media stream (Shur, column 10, lines 1-10).

Implicit in this citation is that the media stream is meant to be played (rendered) in some

kind of signal reproduction device. A user, who has purchased a digitally watermarked

media signal and wishes to render it, puts the digitally watermarked media signal in an

appropriate device. The device "reads" the digital watermark and if the watermark is

valid plays the media signal.

Second, as to Applicant's argument that the cited passages do not provide for re-

embedding an extracted number, the Examiner cannot find any limitation in claim 19 for

the re-embedding of extracted information. The data extracted from the watermark is

not removed from the media signal. It is checked to see if the digital watermark is valid

and allows the media signal to be rendered. If that was the case then the watermark

extracted from the digital signal would result in a digital signal not protected by a

watermark and unlimited distribution and use of the medial signal could occur. There

are provisions in Shur for re-embedding information in a digital watermark, but this

occurs only at the point of distribution (column 11, lines 12-15).

For the reasons presented in the previous office actions, as well as those above,

the Examiner maintains the previously presented 35 USC 102(e) rejection of

independent claim 19.

In response to the Applicant's remark that the limitations of independent claim 15

are not met by the *Shur* patent as to the degradation of the digital watermark, the

Examiner respectfully disagrees.

First, Applicant contends that *Shur* does not teach a digital watermark that

"degrade[s] upon at least one form of signal processing." As detailed in the Final Action,

Shur teaches that the digital watermark has, within it, the number of permissible plays of

a media signal (e.g. song, movie, book,) (*Shur*, column 10, lines 1-10). Each time the

signal in question is played (processed); the permissible number of plays is

decremented. The permissible plays data is contained within the watermark, is part of

said watermark and said watermark changes (degrades) with each play. The Examiner

concedes that *Shur* does not teach "fragile" or "semi-fragile" watermarks, but points out that neither of those terms is used in the claim language.

Second, Applicant contends that Shur does not teach "generating a metric based on an embedded digital watermark." The digital watermark of Shur can contain data about the permitted number of plays from a media signal. The digital watermark has to be extracted and decoding to generate a metric, e.g. the permitted number of plays, that is understandable to the media reproduction device.
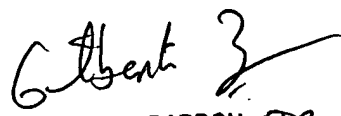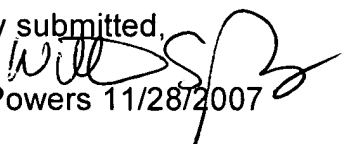
(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

William S. Powers 11/28/2007

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